

IN THE SPECIFICATION:

Please replace the paragraph running from page 1, line 7, to page 2, line 19, of the specification with the following:

This application claims benefit of priority to U.S. Provisional Applications Nos. 60/207,225 and 60/217,099 filed in the United States Patent and Trademark Office on May 26, 2000, and July 10, 2000, respectively. The present document contains subject matter related to that disclosed in commonly owned, co-pending application Serial No. 09/078,616 filed May 14, 1998, entitled ULTRA WIDE BANDWIDTH SPREAD SPECTRUM COMMUNICATIONS SYSTEM (Attorney Docket No. 10188-0001-8); Serial No. 09/633,815, XXX,XXX filed August 7, 2000 entitled ELECTRICALLY SMALL PLANAR UWB ANTENNA (Attorney Docket 10188-0005-8); Application Serial No. 09/563,292, filed May 3, 2000 entitled PLANAR UWB ANTENNA WITH INTEGRATED TRANSMITTER AND RECEIVER CIRCUITS (Attorney Docket 10188-0006-8); ~~Application Serial No. XX/XXX,XXX filed \_\_\_\_\_, entitled ULTRA WIDE BANDWIDTH SYSTEM AND METHOD FOR RADIO FREQUENCY INTERFERENCE CANCELLATION (Attorney Docket 192504US8); Application Serial No. 60/238,466, filed October 10, 2000, XX/XXX,XXX filed \_\_\_\_\_, entitled ULTRA WIDE BANDWIDTH NOISE CANCELLATION MECHANISM AND METHOD (Attorney Docket 193517US8); Application Serial No. 60/217,099 filed July 10, 2000 entitled MULTIMEDIA WIRELESS PERSONAL AREA SYSTEM NETWORK (WPAN) PHYSICAL LAYER SYSTEM AND METHOD Attorney Docket 194308US8PROV); Application Serial No. 09/685,203, filed October 10, 2000, XX/XXX,XXX filed \_\_\_\_\_, entitled SYSTEM AND METHOD FOR BASEBAND REMOVAL OF NARROWBAND INTERFERENCE IN ULTRA WIDEBAND SIGNALS (Attorney Docket 194381US8); Application Serial No.~~

Appl. No. 09/684,401  
Amendment dated January 30, 2004  
Reply to Office Action of October 30, 2003

09/685,197, filed October 10, 2000, XX/XXX,XXX, filed \_\_\_\_\_ entitled MODE  
CONTROLLER FOR SIGNAL ACQUISITION AND TRACKING IN AN ULTRA  
WIDEBAND COMMUNICATION SYSTEM (Attorney Docket 194588US8); Application Serial  
No. 09/685,197, filed October 10, 2000, XX/XXX,XXX filed \_\_\_\_\_ entitled  
ULTRA WIDEBAND COMMUNICATION SYSTEM WITH LOW NOISE PULSE  
FORMATION (Attorney Docket 195268US8); Application Serial No. 09/685,195, filed October  
10, 2000, XX/XXX,XXX filed \_\_\_\_\_ entitled ULTRA WIDE BANDWIDTH  
SYSTEM AND METHOD FOR FAST SYNCHRONIZATION (Attorney Docket 195269US8);  
~~Application Serial No. XX/XXX,XXX filed \_\_\_\_\_ entitled ULTRA WIDE  
BANDWIDTH SYSTEM AND METHOD FOR FAST SYNCHRONIZATION USING  
HADAMMARD CODES (Attorney Docket No. 195270US8); Application Serial No.  
XX/XXX,XXX filed \_\_\_\_\_ entitled ULTRA WIDE BANDWIDTH SYSTEM  
AND METHOD FOR FAST SYNCHRONIZATION USING SUB CODE SPINS (Attorney  
Docket 195272US8); Application Serial No. 09/685,196, filed October 10, 2000,~~  
~~XX/XXX,XXX filed \_\_\_\_\_ entitled ULTRA WIDE BANDWIDTH SYSTEM  
AND METHOD FOR FAST SYNCHRONIZATION USING MULTIPLE DETECTION ARMS  
(Attorney Docket 195273US8); Application Serial No. XX/XXX,XXX filed \_\_\_\_\_  
entitled AGILE CLOCK MECHANISM AND METHOD FOR ULTRA WIDE BANDWIDTH  
COMMUNICATION SYSTEMS (Attorney Docket 195670US8); Application Serial No.  
09/685,202, filed October 10, 2000, XX/XXX,XXX filed \_\_\_\_\_ entitled METHOD  
AND SYSTEM FOR ENABLING DEVICE FUNCTIONS BASED ON DISTANCE  
FORMANCE (Attorney Docket 195671US8); and Application Serial No. 09/685,201, filed  
October 10, 2000, XX/XXX,XXX filed \_\_\_\_\_, entitled CARRIERLESS ULTRA~~

*B2* WIDEBAND WIRELESS SIGNALS FOR CONVEYING APPLICATION DATA (Attorney

Docket 196108US8), where each of the above-identified applications include at least one of J. McCorkle and T. Miller as an inventor, and the entire contents of each of the above-identified documents being incorporated herein by reference.

*B3* Please replace the paragraph running from page 6, lines 27-28, of the specification with the following:

*B3* Figure Figures 14 A-B illustrate exemplary process flows for acquiring and /or tracking a received pulse train; and

*B4* Please replace the paragraph running from page 20, line 29, to page 21, line 11, of the specification with the following:

The code wheel is a representation of the user code with which the incoming data is coded. The code wheel can be visualized as a circular device containing the chips that make up the user code, where each chip is distributed at a fixed interval relative to its nearest neighbor around the code wheel from 0 to  $2\pi$ . Then, the interval between each chip is  $2\pi/n$ , where n is the number of chips in the code. One "rotation" of the code wheel,  $2\pi$ , is equivalent to the bit period  $T_b$  shown in Figure 4A. So, through a "rotation," the phase of the local pulses from PFN 112 is adjusted such that the entire correlation function is generated. As such, when the incoming pulses are aligned with the locally generated pulses, a code wheel turn through one chip in the code ( $2\pi/n$ ) is identical to a phase shift between adjacent pulses of the incoming signal. Methods of moving the phase of the locally generated pulses relative to the received pulse train is the subject of Application Serial No. 09/685,197, filed October 10, 2000, ~~XX/XXX,XXX~~ filed

*By cont.* \_\_\_\_\_ entitled ULTRA WIDEBAND COMMUNICATION SYSTEM WITH LOW NOISE PULSE FORMATION (Attorney Docket 195268US8) the entire contents of which are incorporated herein by reference.

*B5* Please replace the paragraph running from page 21, line 25, to page 22, line 5, of the specification with the following:

After phase acquisition, the received signal may be tracked as a means of maintaining synchronization as in step 304 of Figure 6. This can be done by methods described in, for example, co-pending US patent application entitled "ULTRAWIDE BANDWIDTH SYSTEM AND METHOD FOR FAST SYNCHRONIZATION," serial number 09/685,195,

*B5* ~~XX/XXX,XXX~~, filed concurrently with the present document and having common inventorship as with the present document, the contents of which being incorporated herein by reference. As discussed in the above referenced co-pending patent, many embodiments for performing phase tracking are possible in the current invention. These tracking methods may employ more than one mixer, or just the on-time term from a single mixer as illustrated in the embodiments of the above referenced co-pending patent. During the process of tracking incremental phase errors, a method may be employed for making frequency adjustments to the timing generator 7 in Figure 1A. Various embodiments involving frequency acquisition are possible as discussed in the above co-pending patent.

*B5* Please replace the paragraph running from page 31, lines 24-31, of the specification with the following:

In step 1520, the phase offset,  $\phi$ , is incremented by  $z_j$  from the initial phase offset  $\theta$ , which may be random, such that  $\phi = \theta + z_j$ . In step 1530, the correlation estimate for the current phase offset,  $K$ , is computed.  $K$  is then used to compute the SNR parameter  $R$ . This can be done by methods described in, for example, co-pending US patent application entitled "MODE CONTROLLER FOR SIGNAL ACQUISITION AND TRACKING IN AN ULTRA WIDEBAND COMMUNICATIONS SYSTEM," serial number 09/685,197, XX/XXX,XXX, filed concurrently with the present document and having common inventorship as with the present document, the contents of which being incorporated herein by reference.

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